PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 00947	**FOR FURTHER ACTION** See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/11180	International filing date *(day/month/year)* 08.10.2003	Priority date *(day/month/year)* 28.10.2002
International Patent Classification (IPC) or both national classification and IPC G01N33/574		
Applicant PHARMACIA ITALIA SPA et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24.03.2004	25.11.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Giry, M Telephone No. +49 89 2399-7328

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/11180

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-8 as originally filed

Claims, Numbers

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

   ☐ the entire international application,

   ☒ claims Nos. 1-8

   because:

   ☒ the said international application, or the said claims Nos. 1-2, 5-8 with respect to industrial applicability relate to the following subject matter which does not require an international preliminary examination (specify):

   see separate sheet

   ☒ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. 1-8 are so unclear that no meaningful opinion could be formed *(specify)*:

   see separate sheet

   ☒ the claims, or said claims Nos. 1-8 are so inadequately supported by the description that no meaningful opinion could be formed.

   ☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

   ☐ the written form has not been furnished or does not comply with the Standard.

   ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	9-10
Inventive step (IS)	Yes:	Claims	
	No:	Claims	9-10
Industrial applicability (IA)	Yes:	Claims	9-10
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claims 1-2 and 5-8, due to the step of "detecting CYP3A levels in said patient" (claims 1-2 and 7-8) and to the step of "obtaining a biological sample from a patient" (claims 5-6) relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Art. 34(4)(a)(I) PCT.

2. Claim 1 relates to a "method for treating a patient in need of a drug metabolized primarily by CYP3A" which is however only characterized by a detection step (!). Consequently, claim 1 as disclosed does not enable the skilled person to determine which technical features are necessary to perform said method rendering the comparison to the prior art impossible.
Therefore, the matter for which protection is sought is so unclear that no meaningful examination as regard to novelty and inventive step for the subject-matter of claims 1-2 is possible (Art. 5 PCT and Art. 6 PCT).

3. Independent claim 3 relates to a "method for optimizing the therapeutic efficacy of a drug metabolized primarily by CYP3A in a patient in need thereof, which is merely characterized by "selecting a therapeutically effective amount of said drug based on the previously detected CYP3A levels" (?). However, the skilled person is left guessing how this amount is selected. The description mentioning "a (?) math formula can be applied to calculate a starting dose" (??) (p. 5, lines 28-32) is of no help whatsoever.
The same comment holds true for the "method for treating a cancer sensitive to a drug metabolized primarily by CYP3A" according to independent claim 5.
Therefore, the matter for which protection is sought is so unclear that no meaningful examination as regard to novelty and inventive step for the subject-matter of claims 3-6 is possible (Art. 5 PCT and Art. 6 PCT).

4. The present wording of independent claim 7 relating to a "method of predicting patient's sensitivity to a drug" does not contain any technical feature. Thus, it is not possible to assess claims 7-8 for novelty and inventive step in the sense of Art. 33(2) and (3) PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 - **Reference** is made to the following document :

D1: EP-A-1 088 900, 4 April 2001

2 - **Novelty** - Art. 33(1) and (2) PCT :

Document D1 reports on polymorphisms in the human CYP3A4 genes and their use in diagnostic and therapeutic applications and discloses a kit for detecting the amount of CYPA isoforms (p. 12-13, paragraphs 68-69). Said disclosure falls within the scope of the subject-matter of present claims 9-10 which can therefore not be considered as novel.

Re Item VIII

Certain observations on the international application

1. The application provides no example of the methods subject-matter of claims 1-8. Therefore, the subject-matter of said claims is not supported by the description (Art. 6 PCT) which does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art (Art. 5 PCT). Moreover, the description does not provide any example of the best mode contemplated by the applicant for carrying out the invention claimed (Rule 5.1a)v) PCT ; see also PCT Guidelines II-4.9).

2. The subject-matter of independent claim 9 is unclear since the kit to which said claim relates lacks any technical feature. Thus, claims 9-10 are to be interpreted as "a kit suitable for detecting the amount of CYP3A" (Art. 6 PCT).